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		A fast evolutionary-deterministic algorithm to study multimodal current fields under safety level constraints Modelling of magnetic anisotropy in the finite element method; Reconstruction of crack profile using fuzzy logic; Synthesis of boundary conditions in a subdomain using the numerical Schwarz-Christoffel transformation for the field analysis; Computation of general nonstationary 2D eddy currents in linear

moving arrangements using integrodifferential approach; Three-dimensional finite element modeling of inductive and capacitive effects in micro-coils

Absorbing boundary conditions for compact modeling of on-chip passive structures Wide frequency band analysis of an antenna by finite elements; Application of Spice simulator in the evaluation of crosstalk computational models; Rigorous ADI-FDTD analysis of left-handed metamaterials in optimally-designed EMC applications; Comparison of numerical and measurement methods of SAR of ellipsoidal phantoms with muscle tissue electrical parameters; Numerical modeling of 3D intelligent comb drive accelerometer structure

Finite element analysis of an outer-rotor permanent-magnet brushless DC motor for light traction Computation of eddy current losses in the mounting rail of a magnetically levitated conveyor vehicle; Permanent magnet synchronous motor with exterior-rotor; Improvements in a method to characterize soft ferrite up to high frequencies; Design of magnetically levitated 2D drive; The influence of demagnetisation and temperature on the performance of PM machines; Effects of coil current phase on eddy current loss of permanent magnets in IPM motors EasyMAG - magnetic field toolbox calculator for electrical installation project

| Sommario/riassunto | This e-book is devoted to the papers that were presented at the International Symposium on Electromagnetic Fields in Electrical Engineering ISEF'05 and is guest edited by Professor S.Wiak of the University of Lodz. The papers cover the subject areas of computational electromagnetics, electromagnetic engineering, coupled field and special applications, micro- and special devices, bioelectromagnetics and electromagnetic hazards, and magnetic material modeling |